

**Westbay
Well Summary**

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Location ID: BW-4 Field Representative(s): J. Kirby, D. Menzie

Date Started: 02/02/93 Date Completed: 02/23/93

Northing: 227775.20 Easting: 413654.93

Brass Cap: 4750.75 Outer Casing: 4751.17 Inner Casing: 4752.13

Drilling Method: Mud Rotary Drilling Contractor: Larion Drilling Co.

Driller: Jim Gower

Total Depth Borehole: 482' Total Depth Well Casing: 475'

Total Depth Surface Casing: 244'

Diameter Well Casing: 2" Diameter Surface Casing: 5"

Water Producing (packed-off) Intervals: 260' to 285'

Water Producing (packed-off) Intervals: 345' to 365'

Water Producing (packed-off) Intervals: 455' to 475'

Water Zone Detected: multiple fractures Water Level Open Borehole: 194.92' TSC

Water Level Cased Borehole: see pressure profile data

Quik-Foam Use: 1.5 gallons

Estimated Water Use: 4,550 gallons

Well Casing:

2in x 2ft SCD 80 PVC:	<u>1</u>	=	<u>2</u>	ft
2in x 5ft SCD 80 PVC:	<u>4</u>	=	<u>20</u>	ft
2in x 10ft SCD 80 PVC:	<u>43</u>	=	<u>430</u>	ft
5ft MP packer:	<u>5</u>	=	<u>25</u>	
Total SCD 80 PVC pipe:			<u>477</u>	ft

Regular coupling:	<u>43</u>
Pumping port coupling:	<u>3</u>
Measurement port coupling:	<u>6</u>
End cap:	<u>1</u>
Casing Clamp:	<u> </u>

Surface Casing:

94# bags cement: 60 bags

50# bags bentonite powder 7 bags**Pertinent Field Notes:**

02/01/93 Steam clean and mobilize equipment to site. Begin setting up to drill. - Kirby

02/02/93 Finish setting up to drill. Drill mud rotary 0' to 132' with 8 3/4" mill tooth bit. - Menzie

02/03/93 Drill 132' to 143' using 8.75" mill tooth bit. Blow top-head gasket - stop drilling for rig repair. - Kirby

02/04/93 Finish repairs to tophead. Check bit for wear but it was in good shape. Drill 143' to 150', then blow tophead gasket again. Down for repair. - Menzie

02/05/93 Down for 'repair, no drilling. - Menzie

02/08/93 Finish repairs to tophead motor. Drill 150' to 166'. - Menzie

02/09/93 Drill 166' to 182'. - Menzie

02/10/93 Drill 182' to 223'. - Menzie

02/11/93 Repair mud pump. Drill 223' to 244'. Top of andesite bedrock at \approx 230'. Demobilize mud rig and drill pipe trailer. - Menzie

02/12/93 Install 244' of **5"** steel surface casing and grout annulus to surface. - Menzie

02/16/93 Steam clean and mobilize pipe, bit and collars for 4 1/2" air hammer drilling. Set up and drill from 244' to 330'. Observed formation water produced from borehole (5-10 gpm) at depth of 325'. - Menzie

02/17/93 Drill 330' to 482.0'. Blow hole for one hour with fresh water to clean out as much drilling foam as possible. - Menzie

02/18/93 Demobilize drilling equipment and begin mobilizing Westbay installation equipment. Run full suite of geophysical logs. Measure water level in open borehole at 194.92' TSC. - Menzie

02/19/93 Finish mobilizing Westbay equipment and materials to site. Install 477' of Westbay casing. - Menzie

02/23/93 Lift Westbay casing to make sure hole has not caved since installation. Inflate all five Westbay packers. Demobilize completion equipment and clean up site. - Menzie